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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,012	09/09/2003	Stephen J. Miller	T-6012	3488

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CHEVRON TEXACO CORPORATION  
P.O. BOX 6006  
SAN RAMON, CA 94583-0806

EXAMINER

DOUGLAS, JOHN CHRISTOPHER

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/659,012	<b>Applicant(s)</b> MILLER ET AL.	
	<b>Examiner</b> John C. Douglas	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/9/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 15 recites the limitation "the metal hydrogenation component" in claim 10.

There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1, 3-5, 10-15, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 5833837) in view of Baker (US 5951848).
5. With respect to claims 1 and 3-5, Miller discloses separating a waxy feedstock into a light fraction and a heavy fraction where the heavy fraction has a boiling range between about 900 and 1150 degrees F (see Miller, column 2, lines 50-55 and column 6, lines 50-52). Miller also discloses hydrocracking the light oil fraction (see Miller, column 6, lines 53-54). In addition, Miller discloses isomerizing the light oil fraction in a dewaxing zone and recovering the light lube base oil product (see Miller, column 2, line 66 – column 3, line 8). Also, Miller discloses sending the light lube base oil product to a hydrofinishing unit (see Miller, column 5, lines 48-55).

Miller does not disclose where the feedstock is a hydrocracked residuum with a concentration of sulfur less than 0.5% and a concentration of nitrogen of less than 0.2%.

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However, Baker discloses a feedstock derived from a hydrocracked crude oil residuum with a concentration of sulfur less than about 39 ppm and a concentration of nitrogen less than about 2300 ppm (see Baker, column 4, lines 21-25 and 60-67 and column 18, lines 11-30).

Baker uses a hydrocracked residuum for a feed because the hydrocracking removes sulfur and nitrogen, which would result in very low concentrations of sulfur and nitrogen such as 39 ppm of sulfur and 2300 ppm of nitrogen (see Baker, column 4, lines 65-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Miller to include a feedstock derived from a hydrocracked crude oil residuum in order to remove nitrogen and sulfur resulting in a concentration of sulfur less than about 39 ppm and a concentration of nitrogen less than about 2300 ppm.

6. With respect to claims 10-15, Miller discloses where the isomerization catalyst is a SAPO-11 catalyst with a platinum component (see Miller, column 8, lines 27-39).

7. With respect to claims 16-18, Miller in view of Baker disclose everything in claim 1 (see paragraph 5), but Miller does not disclose where the suitable levels for hydroisomerization dewaxing include a concentration of nitrogen less than 10 ppm and a concentration of sulfur of less than 20 ppm.

However, Baker discloses feed to the isomerization zone with a nitrogen concentration of less than 0.5 ppm and a sulfur concentration of 7 ppm (see Baker, Table 2).

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Baker discloses that the feed was upgraded by hydrocracking prior to dewaxing because high nitrogen and sulfur levels result in unacceptably low catalyst life (see Baker, column 7, lines 40-52 and column 10, lines 59-64).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Miller to include feed to the isomerization zone with a nitrogen concentration of less than 0.5 ppm and a sulfur concentration of 7 ppm in order to preserve catalyst life.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Baker as applied to claim 1 above, and further in view of Fragelli (US 6103101). Miller in view of Baker discloses everything in claim 1 (see paragraph 5), but do not disclose where the hydrocracked feedstock is deasphalted oil.

However, Fragelli discloses deasphalted oil as a feed for producing bright stock (see Fragelli, column 2, lines 56-67).

Fragelli discloses that deasphalted oil is a raw material useful for producing a lube base oil of high viscosity (see Fragelli, column 1, lines 10-13 and column 2, lines 56-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Miller in view of Baker to include deasphalted oil as a feed for producing bright stock in order to use a raw material useful in producing a product with a high viscosity.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Baker as applied to claim 5 above, and further in view of Miller (US 4657661),

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hereinafter referred to as "Miller 2". Miller in view of Baker discloses everything in claim 5, but does not disclose contacting the stabilized lubricant bright stock with clay in a clay treatment zone.

However, Miller 2 discloses treating the bright stock with acidic clay (see Miller 2, column 5, lines 54-68).

Miller 2 discloses that acidic clays are the preferred catalysts for further stabilizing the bright stock (see Miller 2, column 6, lines 3-19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Miller in view of Baker to include treating the bright stock with acidic clay in order to use the preferred catalyst for stabilizing bright stock.

10. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Baker as applied to claim 1 above, and further in view of Fragelli. Miller in view of Baker disclose everything in claim 1 (see paragraph 5), but do not disclose where the bright stock has a viscosity in the range of 20-60 cSt, measured at 100 degrees C and a viscosity index greater than 90.

However, Fragelli discloses a bright stock with a viscosity of 38.68 at 100 degrees C and a viscosity index of 94 (see Fragelli, Table 2, column 11).

Fragelli discloses that lube oil with a high viscosity produces less engine wear and higher fuel efficiency (see Fragelli, column 3, lines 12-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Miller in view of Baker to include a

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bright stock with a viscosity of 38.68 at 100 degrees C and a viscosity index of 94 in order to have a lube oil that produces less engine wear and higher fuel efficiency.

### **Conclusion**

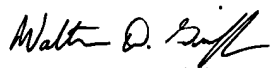
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Apelian (US 5885438) and Miller (US 6686511).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Douglas whose telephone number is 571-272-1087. The examiner can normally be reached on 7:30 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCD

  
**Walter D. Griffin**  
**Primary Examiner**